

Serial Number: 09/909,474B

CRF Processing Date: 4/8/02
Edited by: DC
Verified by: (STIC staff)

- ☐ Changed a file from non-ASCII to ASCII
- ☐ Changed the margins in cases where the sequence text was "wrapped" down to the next line.
- ☐ Edited a format error in the Current Application Data section, specifically: **ENTERED**
- ☐ Edited the Current Application Data section with the actual current number. The number inputted by the applicant was ☐ the prior application data; or ☐ other _____
- ☐ Added the mandatory heading and subheadings for "Current Application Data".
- ☐ Edited the "Number of Sequences" field. The applicant spelled out a number instead of using an integer.
- ☐ Changed the spelling of a mandatory field (the headings or subheadings), specifically: _____
- ☐ Corrected the SEQ ID NO when obviously incorrect. The sequence numbers that were edited were: _____
- ☐ Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited: _____
- ☐ Corrected subheading placement. All responses must be on the same line as each subheading. If the applicant placed a response below the subheading, this was moved to its appropriate place.
- ☐ Inserted colons after headings/subheadings. Headings edited included: _____
- ☐ Deleted extra, invalid, headings used by an applicant, specifically: _____
- ☒ Deleted: ☒ non-ASCII "garbage" at the beginning/end of files; ☐ secretary initials/filename at end of file;
☐ page numbers throughout text; ☐ other invalid text, such as _____
- ☐ Inserted mandatory headings, specifically: _____
- ☐ Corrected an obvious error in the response, specifically: _____
- ☐ Edited identifiers where upper case is used but lower case is required, or vice versa.
- ☐ Corrected an error in the Number of Sequences field, specifically: _____
- ☐ A "Hard Page Break" code was inserted by the applicant. All occurrences had to be deleted.
- ☐ Deleted **ending** stop codon in amino acid sequences and adjusted the "(A)Length:" field accordingly (error due to a PatentIn bug). Sequences corrected: _____
- ☐ Other: _____

*Examiner: The above corrections must be communicated to the applicant in the first Office Action. DO NOT send a copy of this form.



OIPE

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/909,474B

DATE: 04/08/2002

TIME: 12:59:25

Input Set : A:\PTO.DC.txt

Output Set: N:\CRF3\04082002\I909474B.raw

5 <110> APPLICANT: Boylan, John
 6 Bowers, Alex
 8 <120> TITLE OF INVENTION: Novel Serine Threonine Kinase Member, h2520-59
 10 <130> FILE REFERENCE: 01017/36524A
 12 <140> CURRENT APPLICATION NUMBER: US/09/909,474B
 13 <141> CURRENT FILING DATE: 2001-07-19
 15 <150> PRIOR APPLICATION NUMBER: US 60/219,204
 16 <151> PRIOR FILING DATE: 2000-07-19
 18 <160> NUMBER OF SEQ ID NOS: 15
 20 <170> SOFTWARE: PatentIn version 3.0
 22 <210> SEQ ID NO: 1
 23 <211> LENGTH: 2059
 24 <212> TYPE: DNA
 25 <213> ORGANISM: Homo sapiens
 27 <220> FEATURE:
 28 <221> NAME/KEY: CDS
 29 <222> LOCATION: (49)..(1122)
 31 <400> SEQUENCE: 1
 32 gctctgagcc ccggcggcgc ccgggcccac gcggaacgac ggggcgag atg cga gcc 57
 33 Met Arg Ala
 34 1
 36 acc cct ctg gct gct cct gcg ggt tcc ctg tcc agg aag aag cgg ttg 105
 37 Thr Pro Leu Ala Ala Pro Ala Gly Ser Leu Ser Arg Lys Lys Arg Leu
 38 5 10 15
 40 gag ttg gat gac aac tta gat acc gag cgt ccc gtc cag aaa cga gct 153
 41 Glu Leu Asp Asp Asn Leu Asp Thr Glu Arg Pro Val Gln Lys Arg Ala
 42 20 25 30 35
 44 cga agt ggg ccc cag ccc aga ctg ccc ccc tgc ctg ttg ccc ctg agc 201
 45 Arg Ser Gly Pro Gln Pro Arg Leu Pro Pro Cys Leu Leu Pro Leu Ser
 46 40 45 50
 48 cca cct act gct cca gat cgt gca act gct gtg gcc act gcc tcc cgt 249
 49 Pro Pro Thr Ala Pro Asp Arg Ala Thr Ala Val Ala Thr Ala Ser Arg
 50 55 60 65
 52 ctt ggg ccc tat gtc ctc ctg gag ccc gag gag ggc ggg cgg gcc tac 297
 53 Leu Gly Pro Tyr Val Leu Leu Glu Pro Glu Glu Gly Gly Arg Ala Tyr
 54 70 75 80
 56 cgg gcc ctg cac tgc cct aca ggc act gag tat acc tgc aag gtg tac 345
 57 Arg Ala Leu His Cys Pro Thr Gly Thr Glu Tyr Thr Cys Lys Val Tyr
 58 85 90 95
 60 ccc gtc cag gaa gcc ctg gcc gtg ctg gag ccc tac gcg cgg ctg ccc 393
 61 Pro Val Gln Glu Ala Leu Ala Val Leu Glu Pro Tyr Ala Arg Leu Pro
 62 100 105 110 115
 65 ccg cac aag cat gtg gct cgg ccc act gag gtc ctg gct ggt acc cag 441

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Input Set : A:\PTO.DC.txt

Output Set: N:\CRF3\04082002\I909474B.raw

66	Pro	His	Lys	His	Val	Ala	Arg	Pro	Thr	Glu	Val	Leu	Ala	Gly	Thr	Gln	
67				120						125					130		
69	ctc	ctc	tac	gcc	ttt	ttc	act	cgg	acc	cat	ggg	gac	atg	cac	agc	ctg	489
70	Leu	Leu	Tyr	Ala	Phe	Phe	Thr	Arg	Thr	His	Gly	Asp	Met	His	Ser	Leu	
71				135						140					145		
73	gtg	cga	agc	cgc	cac	cgt	atc	cct	gag	cct	gag	gct	gcc	gtg	ctc	ttc	537
74	Val	Arg	Ser	Arg	His	Arg	Ile	Pro	Glu	Pro	Glu	Ala	Ala	Val	Leu	Phe	
75				150						155					160		
77	cgc	cag	atg	gcc	acc	gcc	ctg	gcg	cac	tgt	cac	cag	cac	ggg	ctg	gtc	585
78	Arg	Gln	Met	Ala	Thr	Ala	Leu	Ala	His	Cys	His	Gln	His	Gly	Leu	Val	
79				165						170					175		
81	ctg	cgt	gat	ctc	aag	ctg	tgt	cgc	ttt	gtc	ttc	gct	gac	cgt	gag	agg	633
82	Leu	Arg	Asp	Leu	Lys	Leu	Cys	Arg	Phe	Val	Phe	Ala	Asp	Arg	Glu	Arg	
83	180						185					190				195	
85	aag	aag	ctg	gtg	ctg	gag	aac	ctg	gag	gac	tcc	tgc	gtg	ctg	act	ggg	681
86	Lys	Lys	Leu	Val	Leu	Glu	Asn	Leu	Glu	Asp	Ser	Cys	Val	Leu	Thr	Gly	
87					200					205					210		
89	cca	gat	gat	tcc	ctg	tgg	gac	aag	cac	gcg	tgc	cca	gcc	tac	gtg	gga	729
90	Pro	Asp	Asp	Ser	Leu	Trp	Asp	Lys	His	Ala	Cys	Pro	Ala	Tyr	Val	Gly	
91					215					220					225		
93	cct	gag	ata	ctc	agc	tca	cgg	gcc	tca	tac	tcg	ggc	aag	gca	gcc	gat	777
94	Pro	Glu	Ile	Leu	Ser	Ser	Arg	Ala	Ser	Tyr	Ser	Gly	Lys	Ala	Ala	Asp	
95				230						235					240		
97	gtc	tgg	agc	ctg	ggc	gtg	gcg	ctc	ttc	acc	atg	ctg	gcc	ggc	cac	tac	825
98	Val	Trp	Ser	Leu	Gly	Val	Ala	Leu	Phe	Thr	Met	Leu	Ala	Gly	His	Tyr	
99				245						250					255		
101	ccc	ttc	cag	gac	tcg	gag	cct	gtc	ctg	ctc	ttc	ggc	aag	atc	cgc	cgc	873
102	Pro	Phe	Gln	Asp	Ser	Glu	Pro	Val	Leu	Leu	Phe	Gly	Lys	Ile	Arg	Arg	
103	260						265					270				275	
105	ggg	gcc	tac	gcc	ttg	cct	gca	ggc	ctc	tcg	gcc	cct	gcc	cgc	tgt	ctg	921
106	Gly	Ala	Tyr	Ala	Leu	Pro	Ala	Gly	Leu	Ser	Ala	Pro	Ala	Arg	Cys	Leu	
107					280						285				290		
109	gtt	cgc	tgc	ctc	ctt	cgt	cgg	gag	cca	gct	gaa	cgg	ctc	aca	gcc	aca	969
110	Val	Arg	Cys	Leu	Leu	Arg	Arg	Glu	Pro	Ala	Glu	Arg	Leu	Thr	Ala	Thr	
111					295					300					305		
113	ggc	atc	ctc	ctg	cac	ccc	tgg	ctg	cga	cag	gac	ccg	atg	ccc	tta	gcc	1017
114	Gly	Ile	Leu	Leu	His	Pro	Trp	Leu	Arg	Gln	Asp	Pro	Met	Pro	Leu	Ala	
115				310						315					320		
117	cca	acc	cga	tcc	cat	ctc	tgg	gag	gct	gcc	cag	gtg	gtc	cct	gat	gga	1065
118	Pro	Thr	Arg	Ser	His	Leu	Trp	Glu	Ala	Ala	Gln	Val	Val	Pro	Asp	Gly	
119				325						330					335		
121	ctg	ggg	ctg	gac	gaa	gcc	agg	gaa	gag	gag	gga	gac	aga	gaa	gtg	gtt	1113
122	Leu	Gly	Leu	Asp	Glu	Ala	Arg	Glu	Glu	Glu	Gly	Asp	Arg	Glu	Val	Val	
123	340						345				350				355		
125	ctg	tat	ggc	taggaccacc	ctactacacg	ctcagctgcc	aacagtggat										1162
126	Leu	Tyr	Gly														
129	tgagtttggg	ggtagctcca	agccttctcc	tgccctctgaa	ctgagccaaa	ccttcagtgc											1222
131	cttccagaag	ggagaaaggc	agaagcctgt	gtggagtgtg	ctgtgtacac	atctgctttg											1282
133	ttccacacac	atgcagttcc	tgcttgggtg	cttatcaggt	gccaaagccct	gttctcgggtg											1342

RAW SEQUENCE LISTING

DATE: 04/08/2002

PATENT APPLICATION: US/09/909,474B

TIME: 12:59:25

Input Set : A:\PTO.DC.txt

Output Set: N:\CRF3\04082002\I909474B.raw

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135 ctgggagtagc agcagtgagc aaaggagaca atattccctg ctcacagaga tgacaaaactg 1402
137 gcatccttga gctgacaaca cttttccatg accatagggtc actgtctaca ctgggtacac 1462
139 tttgtaccag tgtcggcctc cactgatgct ggtgctcagg cacctctgtc caaggacaat 1522
141 ccctttcaca aacaaaccag ctgcctttgt atcttgtacc ttttcagaga aaggagggtta 1582
143 tccctgtgcc aaaggctcca ggcctctccc ctgcaactca ggacccaagc ccagctcact 1642
145 ctgggaactg tgttccagc atctctgtcc tcttgattaa gagattctcc ttccaggcct 1702
147 aagcctggga tttgggcccag agataagaat ccaaactatg aggctagttc ttgtctaact 1762
149 caagactggt ctggaatgag ggtccaggcc tgtcaaccat ggggcttctg acctgagcac 1822
151 caaggttgag ggacaggatt aggcagggtc tgtcctgtgg ccacctggaa agtcccagggt 1882
153 gggactcttc tggggacact tggggctccac aatcccagggt ccatactcta ggttttggat 1942
155 accatgagta tgtatgttta cctgtgccta ataaaggaga attatgaaat aaaaaaaaaa 2002
157 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaa 2059
160 <210> SEQ ID NO: 2
161 <211> LENGTH: 358
162 <212> TYPE: PRT
163 <213> ORGANISM: Homo sapiens
165 <400> SEQUENCE: 2
167 Met Arg Ala Thr Pro Leu Ala Ala Pro Ala Gly Ser Leu Ser Arg Lys
168 1 5 10 15
171 Lys Arg Leu Glu Leu Asp Asp Asn Leu Asp Thr Glu Arg Pro Val Gln
172 20 25 30
175 Lys Arg Ala Arg Ser Gly Pro Gln Pro Arg Leu Pro Pro Cys Leu Leu
176 35 40 45
179 Pro Leu Ser Pro Pro Thr Ala Pro Asp Arg Ala Thr Ala Val Ala Thr
180 50 55 60
183 Ala Ser Arg Leu Gly Pro Tyr Val Leu Leu Glu Pro Glu Glu Gly Gly
184 65 70 75 80
187 Arg Ala Tyr Arg Ala Leu His Cys Pro Thr Gly Thr Glu Tyr Thr Cys
188 85 90 95
193 Lys Val Tyr Pro Val Gln Glu Ala Leu Ala Val Leu Glu Pro Tyr Ala
194 100 105 110
197 Arg Leu Pro Pro His Lys His Val Ala Arg Pro Thr Glu Val Leu Ala
198 115 120 125
201 Gly Thr Gln Leu Leu Tyr Ala Phe Phe Thr Arg Thr His Gly Asp Met
202 130 135 140
205 His Ser Leu Val Arg Ser Arg His Arg Ile Pro Glu Pro Glu Ala Ala
206 145 150 155 160
209 Val Leu Phe Arg Gln Met Ala Thr Ala Leu Ala His Cys His Gln His
210 165 170 175
213 Gly Leu Val Leu Arg Asp Leu Lys Leu Cys Arg Phe Val Phe Ala Asp
214 180 185 190
217 Arg Glu Arg Lys Lys Leu Val Leu Glu Asn Leu Glu Asp Ser Cys Val
218 195 200 205
221 Leu Thr Gly Pro Asp Asp Ser Leu Trp Asp Lys His Ala Cys Pro Ala
222 210 215 220
225 Tyr Val Gly Pro Glu Ile Leu Ser Ser Arg Ala Ser Tyr Ser Gly Lys
226 225 230 235 240
229 Ala Ala Asp Val Trp Ser Leu Gly Val Ala Leu Phe Thr Met Leu Ala
230 245 250 255

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RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/909,474B

DATE: 04/08/2002

TIME: 12:59:25

Input Set : A:\PTO.DC.txt

Output Set: N:\CRF3\04082002\I909474B.raw

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233 Gly His Tyr Pro Phe Gln Asp Ser Glu Pro Val Leu Leu Phe Gly Lys
234                260                265                270
237 Ile Arg Arg Gly Ala Tyr Ala Leu Pro Ala Gly Leu Ser Ala Pro Ala
238                275                280                285
241 Arg Cys Leu Val Arg Cys Leu Leu Arg Arg Glu Pro Ala Glu Arg Leu
242                290                295                300
245 Thr Ala Thr Gly Ile Leu Leu His Pro Trp Leu Arg Gln Asp Pro Met
246 305                310                315                320
249 Pro Leu Ala Pro Thr Arg Ser His Leu Trp Glu Ala Ala Gln Val Val
250                325                330                335
253 Pro Asp Gly Leu Gly Leu Asp Glu Ala Arg Glu Glu Glu Gly Asp Arg
254                340                345                350
257 Glu Val Val Leu Tyr Gly
258                355

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261 <210> SEQ ID NO: 3

262 <211> LENGTH: 21

263 <212> TYPE: DNA

264 <213> ORGANISM: Artificial Sequence

266 <220> FEATURE:

267 <223> OTHER INFORMATION: PCR Primer

269 <400> SEQUENCE: 3

270 tgggtgctgga gaacctggag g

21

273 <210> SEQ ID NO: 4

274 <211> LENGTH: 21

275 <212> TYPE: DNA

276 <213> ORGANISM: Artificial Sequence

278 <220> FEATURE:

279 <223> OTHER INFORMATION: PCR Primer

W--> 280 <400> SEQUENCE: 4

281 cgagtcctgg aaggggtagt g

21

284 <210> SEQ ID NO: 5

285 <211> LENGTH: 11

286 <212> TYPE: PRT

287 <213> ORGANISM: Artificial Sequence

289 <220> FEATURE:

290 <223> OTHER INFORMATION: HIV TAT peptide

292 <400> SEQUENCE: 5

294 Tyr Gly Arg Lys Lys Arg Arg Gln Arg Arg Arg

295 1 5 10

297 <210> SEQ ID NO: 6

298 <211> LENGTH: 20

299 <212> TYPE: DNA

300 <213> ORGANISM: Artificial Sequence

302 <220> FEATURE:

303 <223> OTHER INFORMATION: PCR Primer

305 <400> SEQUENCE: 6

306 cggggcgaga tgcgagccac

20

309 <210> SEQ ID NO: 7

310 <211> LENGTH: 20

RAW SEQUENCE LISTING

DATE: 04/08/2002

PATENT APPLICATION: US/09/909,474B

TIME: 12:59:25

Input Set : A:\PTO.DC.txt

Output Set: N:\CRF3\04082002\I909474B.raw

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311 <212> TYPE: DNA
312 <213> ORGANISM: Artificial Sequence
314 <220> FEATURE:
315 <223> OTHER INFORMATION: PCR Primer
317 <400> SEQUENCE: 7
318 aggggtggtcc tagccataca
321 <210> SEQ ID NO: 8
322 <211> LENGTH: 358
323 <212> TYPE: PRT
324 <213> ORGANISM: Homo sapiens
326 <400> SEQUENCE: 8
328 Met Arg Ala Thr Pro Leu Ala Ala Pro Ala Gly Ser Leu Ser Arg Lys
329 1 5 10 15
331 Lys Arg Leu Glu Leu Asp Asp Asn Leu Asp Thr Glu Arg Pro Val Gln
332 20 25 30
334 Lys Arg Ala Arg Ser Gly Pro Gln Pro Arg Leu Pro Pro Cys Leu Leu
335 35 40 45
337 Pro Leu Ser Pro Pro Thr Ala Pro Asp Arg Ala Thr Ala Val Ala Thr
338 50 55 60
340 Ala Ser Arg Leu Gly Pro Tyr Val Leu Leu Glu Pro Glu Glu Gly Gly
341 65 70 75 80
343 Arg Ala Tyr Gln Ala Leu His Cys Pro Thr Gly Thr Glu Tyr Thr Cys
344 85 90 95
346 Lys Val Tyr Pro Val Gln Glu Ala Pro Ala Val Leu Glu Pro Tyr Ala
347 100 105 110
349 Arg Leu Pro Pro His Lys His Val Ala Arg Pro Thr Glu Val Leu Ala
350 115 120 125
352 Gly Thr Gln Leu Leu Tyr Ala Phe Phe Thr Arg Thr His Gly Asp Met
353 130 135 140
355 His Ser Leu Val Arg Ser Arg His Arg Ile Pro Glu Pro Glu Ala Ala
356 145 150 155 160
358 Val Leu Phe Arg Gln Met Ala Thr Ala Leu Ala His Cys His Gln His
359 165 170 175
361 Gly Leu Val Leu Arg Asp Leu Lys Leu Cys Arg Phe Val Phe Ala Asp
362 180 185 190
364 Arg Glu Arg Lys Lys Leu Val Leu Glu Asn Leu Glu Asp Ser Cys Val
365 195 200 205
367 Leu Thr Gly Pro Asp Asp Ser Leu Trp Asp Lys His Ala Cys Pro Ala
368 210 215 220
370 Tyr Val Gly Pro Glu Ile Leu Ser Ser Arg Ala Ser Tyr Ser Gly Lys
371 225 230 235 240
373 Ala Ala Asp Val Trp Ser Leu Gly Val Ala Leu Phe Thr Met Leu Ala
374 245 250 255
376 Gly His Tyr Pro Phe Gln Asp Ser Glu Pro Val Leu Leu Phe Gly Lys
377 260 265 270
379 Ile Arg Arg Gly Ala Tyr Ala Leu Pro Ala Gly Leu Ser Ala Pro Ala
380 275 280 285
382 Arg Cys Leu Val Arg Cys Leu Leu Arg Arg Glu Pro Ala Glu Arg Leu
383 290 295 300

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20

RAW SEQUENCE LISTING ERROR SUMMARY DATE: 04/08/2002
PATENT APPLICATION: US/09/909,474B TIME: 12:59:26

Input Set : A:\PTO.DC.txt
Output Set: N:\CRF3\04082002\I909474B.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:9; Xaa Pos. 136,138,141,142,143,152

VERIFICATION SUMMARY

DATE: 04/08/2002

PATENT APPLICATION: US/09/909,474B

TIME: 12:59:26

Input Set : A:\PTO.DC.txt

Output Set: N:\CRF3\04082002\I909474B.raw

L:280 M:283 W: Missing Blank Line separator, <400> field identifier
L:458 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:128
L:461 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:144



OIPE

Does Not Comply
Corrected Diskette Needed

RAW SEQUENCE LISTING

DATE: 04/04/2002

PATENT APPLICATION: US/09/909,474B

TIME: 16:59:39

Input Set : A:\PTO.VSK.txt

Output Set: N:\CRF3\04042002\I909474B.raw

5 <110> APPLICANT: Boylan, John
 6 Bowers, Alex
 8 <120> TITLE OF INVENTION: Novel Serine Threonine Kinase Member, h2520-59
 10 <130> FILE REFERENCE: 01017/36524A
 12 <140> CURRENT APPLICATION NUMBER: US/09/909,474B
 13 <141> CURRENT FILING DATE: 2001-07-19
 15 <150> PRIOR APPLICATION NUMBER: US 60/219,204
 16 <151> PRIOR FILING DATE: 2000-07-19
 18 <160> NUMBER OF SEQ ID NOS: 15
 20 <170> SOFTWARE: PatentIn version 3.0

ERRORED SEQUENCES

644 <210> SEQ ID NO: 15
 645 <211> LENGTH: 25
 646 <212> TYPE: PRT
 647 <213> ORGANISM: Homo sapiens
 649 <400> SEQUENCE: 15
 651 Arg Ser His Leu Trp Glu Ala Ala Gln Val Val Pro Asp Gly Leu Gly
 652 1 5 10 15
 654 Leu Asp Glu Ala Arg Glu Glu Glu Cys
 655 20 25

E--> 658 (-4-) -delete

VERIFICATION SUMMARY

DATE: 04/04/2002

PATENT APPLICATION: US/09/909,474B

TIME: 16:59:40

Input Set : A:\PTO.VSK.txt

Output Set: N:\CRF3\04042002\I909474B.raw

L:280 M:283 W: Missing Blank Line separator, <400> field identifier
L:458 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9
L:461 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9
L:658 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:15